

AMENDMENT TO SPECIFICATION

Amend the two paragraphs from page 1, line 11 to page 2, line 11 as follows:

In prior arts in which the liquid droplet is ~~seattered~~ delivered by the fact that a plunger closely slides along an inner face of a tubular member, there is one in which the plunger whose tip face closely contacts with a liquid material is forwardly advanced at high speed and the liquid material is discharged by applying an inertial force to the liquid material by subsequently abruptly stopping a means for driving the plunger (for example, refer to Japanese Patent Application Number 2002-301239). Further, there is one in which the plunger is provided in a liquid feed passage communicating a nozzle discharging the liquid material with a storage part storing the liquid material (for example, refer to JP-A-2003-126750 Gazette).

The above prior art references disclosed a technique for separating the liquid material from the nozzle before the liquid material is adhered to a body, such as a work, to be coated and a technique effective for ~~seattering~~ delivering one liquid material to discharge, but have not been ones disclosing a method for improving a quantity accuracy at every time when the liquid droplet is repeatedly discharged. In the prior arts, there are the fact that two or more liquid droplets are discharged from the nozzle in one plunger operation for discharging the liquid material and the fact that no liquid droplet is discharged, so that a further improvement in the discharge quantity accuracy at every discharge has been desired.

Amend the paragraph from page 3, line 21 to page 4, line 15, as follows:

According to a fifth aspect of the invention, there is provided an apparatus for discharging a liquid material, which possesses a tube, a plunger sliding while closely contacting with an inner wall face of the tube, a discharge port communicating with the tube and discharging the liquid material so as to be ~~seattered~~ delivered, and a control means controlling an operation of the plunger, characterized in that the control means controls a moving speed of the plunger moving forward from start of deceleration to stop. According to a sixth aspect of the invention, there is provided an apparatus for discharging a liquid material of the fifth aspect, characterized by

having an indication means (input means) indicating the moving speed of the plunger moving forward from start of deceleration to stop to the control means. According to a seventh aspect of the invention, there is provided an apparatus for discharging a liquid material of the sixth aspect, characterized in that the control means controls the operation of the plunger on the basis of data concerning the moving speed of the plunger moving forward from start of deceleration to stop, which has been indicated (inputted) by the indication means (input means).

Amend the paragraph from page 5, line 18 to page 6, line 11 as follows:

During a plunger movement process when the plunger presses the liquid material in the tube to discharge the liquid droplet from the nozzle tip, i.e., during a process in which, after the stopped plunger has started its forward movement and accelerated to keep a constant speed, the plunger is moved by a regulated amount by the fact that the plunger is stopped by being decelerated (from a to h in Figs. 1A and 1B), or during a process in which the plunger is moved by a regulated amount by the fact that the plunger is stopped by being decelerated by the fact that the stopped plunger has started its forward movement and accelerated but not kept the constant speed (from a to g in Figs. 2A and 2B), it is possible to control the inertial force given to the liquid material when the liquid material discharged from the nozzle tip is divided into the liquid material remaining in a nozzle side and the liquid droplet ~~seattered~~ delivered from the nozzle, so that the division can be smoothly performed.

Amend the paragraph from page 8, line 21 to page 9, line 14, as follows:

For the discharge of the liquid material, the liquid material supplying valve 10 is made the closed position, the discharge valve 4 is made the open position, and the plunger 2 is moved forward in compliance with a desired discharge quantity. Here, it is possible to calculate a forward movement amount of the plunger 2 by the desired discharge quantity and the inner diameter of the metering part 1. As to the forward movement operation of the plunger 2, the plunger 2 abruptly stops its movement by, after being abruptly accelerated, abruptly stopping the

plunger driving means without the plunger 2 being butted against a valve seat, and the liquid material in the metering part 1 is discharged from the nozzle 7 tip by the inertial force given by the high speed movement and the abrupt stopping of the plunger 2. If the inertial force becomes large, the liquid material is ~~scattered~~ delivered. Here, since the inner diameter of the metering part 1 and the inner diameter of the discharge valve 4 are approximately equal, a pressure loss is small, so that the force given to the liquid material can be effectively utilized to discharge the liquid material.

Amend the paragraph starting at page 10, line 15 to page 11, line 12 as follows:

As to a control of a discharge state of the liquid material in the above control part, the liquid droplet quantity discharged from the nozzle tip is determined by an amount of the forward movement of the plunger which slides closely to the inner wall surface of the tube to press the liquid material. Accordingly, during a plunger movement process when the plunger presses the liquid material in the tube to discharge the liquid droplet from the nozzle tip, i.e., during a process in which, after the stopped plunger has started its forward movement and accelerated to keep a constant speed, the plunger is moved by a regulated amount by the fact that the plunger is stopped by being decelerated (from a to h in Figs. 1A and 1B), or during a process in which the plunger is moved by a regulated amount by the fact that the plunger is stopped by being decelerated by the fact that the stopped plunger has started its forward movement and accelerated but not kept the constant speed (from a to g in Figs. 2A and 2B), it is possible to control the inertial force given to the liquid material when the liquid material discharged from the nozzle tip is divided into the liquid material remaining in a nozzle side and the liquid droplet ~~scattered~~ delivered from the nozzle by controlling the deceleration degree of the plunger moving forward (from e to h in Fig. 1 and from d to g in Fig. 2), so that the division can be smoothly performed.